

Instrumentation for cryogenics at CERN

The controls and instrumentation infrastructure at CERN is strongly dependent on whether radiation is present or not. The former concerns typically the refrigerators and its associated infrastructure, these are procured as turn-key facilities and most instruments are standard commercial parts.

Radiation constraints on the other hand impose a complicated quality assurance policy. CERN cryogenics group invested a great effort in radiation qualification campaigns and for signal conditioning a radiation tolerant field electronics was developed. The LHC instrumentation channels are operational since 2007 and in particular the temperature readout quality matches what is found in specialized laboratories.

Summary

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